

2008 Statewide Rail Resource Allocation Plan

December 15, 2008



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Overview

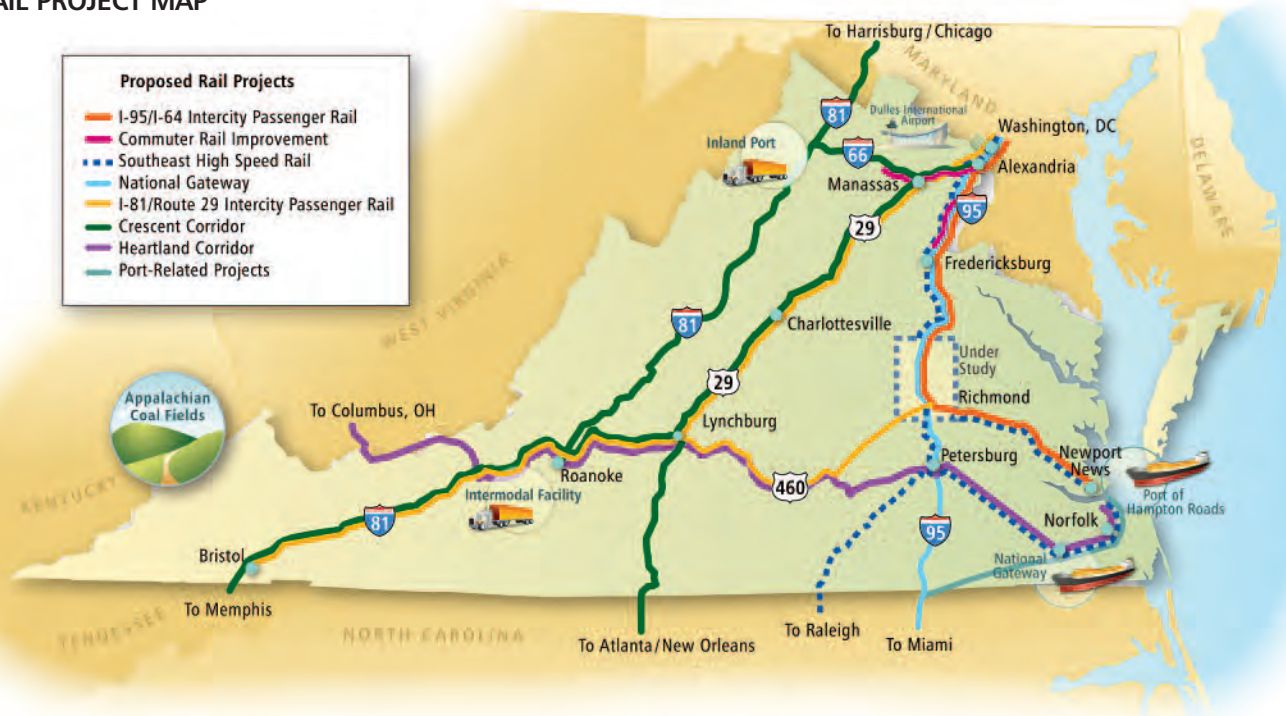
With the December 2004 adoption of VTRANS2025, the Commonwealth's long-range multimodal plan, Virginia outlined the importance of freight and passenger rail in providing additional transportation choices to both citizens and businesses as part of the Commonwealth's transportation system. VTRANS2025 identified strategies for making rail a viable option. These strategies focused on dedicating funding to rail projects and strengthening the partnership between freight rail lines, passenger rail service providers, the Commonwealth and federal agencies. In less than five years, these strategies have been implemented and significant progress has been made.

The establishment of the Rail Enhancement Fund with dedicated funding has allowed the Commonwealth to

foster rail development and advance multimodal transportation solutions. The Commonwealth Transportation Board (CTB) adopted specific policy goals for using the Fund's resources (*Appendix A*), and they serve as the foundation for project selection and funding.

To carry this vision into the future, in July 2008 the Commonwealth's Draft Statewide Rail Plan was released for public comment. The Draft Statewide Rail Plan described potential rail projects that could provide public benefit with the investment of public funds. The Draft Plan also concluded that the Commonwealth must foster partnerships to balance the competing demands for rail line use, since most rail lines in Virginia are owned and operated by private rail companies.

Figure 1-1
RAIL PROJECT MAP



This plan provides funding to support key elements of eight major rail initiatives.

Figure 1-2

EIGHT DISCRETE PROJECTS (\$ IN MILLIONS)

Project	Transportation Corridor	Cost In 2008 \$
I-95/I-64 Intercity Passenger Rail Project	I-95/I-64	\$3,580.7
Commuter Rail Improvement Project	I-95/I-81	303.4
Southeast High Speed Rail Project	I-95	1,717.7
National Gateway Project	I-95	188.0
I-81/Route 29 Intercity Passenger Rail Project	I-81	210.6
Crescent Corridor Project	I-81	514.2
Heartland Corridor Project	Route 460	27.7
Ports of Virginia Project	—	64.1
TOTALS		\$6,606.4

This Plan identifies eight discrete projects that the Virginia Department of Rail and Public Transportation (DRPT) recommends for funding. The eight projects are shown in *Figure 1-1* and costs are provided in *Figure 1-2*. These rail projects have a total estimated capital cost of \$6.6 billion in 2008 dollars. The capital improvements associated with the recommended projects include new tracks, passenger rail stations, signal upgrades, right-of-way, locomotives and cars to support passenger service. It is estimated that there will be approximately \$874 million of funding dedicated to rail capital projects over the next 25 years. Since the Rail Enhancement Fund requires a minimum of 30 percent matching funds from private or other public sources, at least \$375 million in additional funds is anticipated, resulting in a total of \$1.25 billion available for rail capital projects.

The passenger rail projects recommended in this Plan will require a new source of funds dedicated to defraying the costs associated with operating the service on a daily basis. The operating funding is needed to support costs associated with railroad access fees, operating labor (conductors and maintenance personnel), fuel, food service and other direct operating costs. The range of operating subsidy to increase passenger rail operations in the Commonwealth is estimated at \$5.4 million in FY 2010, increasing to \$174 million in FY 2035 assuming significant expansion and increased frequencies of passenger rail service. There is currently no source of dedicated funds for intercity passenger rail operations in the Commonwealth.

Given the significant disparity between project costs and available revenues and the general decline in federal and state transportation revenues, DRPT is taking a pragmatic approach that recognizes funding limitations. Accordingly, the eight capital projects have been divided into 27 different phases that consist of more than 100 project elements that can be further constrained as needed. Additionally, this Plan recommends the implementation of a three-year pilot project with Amtrak to provide two new intercity trains: one originating from Staples Mill in Richmond and terminating in Washington, DC and the other originating in Lynchburg and terminating in Washington, DC. The purpose of the pilot program is to confirm ridership estimates and public benefits through actual operations. The performance of the pilot program will assist the Commonwealth in making key investment decisions regarding future service enhancements.

This Rail Resource Allocation Plan assesses the project phases against the Commonwealth's adopted policy goals for the Rail Enhancement Fund (*Figure 4-1*) and identifies options for providing both the capital and operating funding required for the projects.

This Plan does not include shortline railroad projects (funded separately through the Rail Preservation Fund), rail industrial access fund projects or public transportation rail projects such as Norfolk Light Rail and the Washington Metropolitan Area Transit Authority that are funded from other sources, including the Mass Transit Trust Fund.

Improving Virginia's Rail System

Past Accomplishments

Virginia has been one of the leading states in implementing rail improvements to support improved transportation choices for businesses and citizens. Investments to increase the diversion of freight from trucks to rail, particularly freight moving to and from the Port of Virginia, and investments to provide citizens with improved travel options through the advancement of higher-speed rail in the Commonwealth top the list of rail priorities and accomplishments. Over the last six years, the Commonwealth has:

- Developed the first dedicated source of funding for passenger and freight rail capital improvements in Virginia's history. Initiated in 2005, the Rail Enhancement Fund supports capital improvements for passenger and freight rail transportation that deliver public benefits through public-private partnerships, such as:

- Improving the movement of freight from the Port of Virginia through a public-private effort involving Norfolk Southern and several states to construct a double-stack container train corridor between the Port of Virginia and Columbus, OH. In Virginia, the project includes raising tunnels to accommodate the taller trains and constructing a new intermodal terminal facility in the Roanoke region.
- Doubling the on-dock rail yard capacity to transfer containers to/from rail at the new Maersk APM Terminal marine facility at the Port of Virginia, a project utilizing shared public-private funding. As a result, more freight can be moved on rail to reduce truck traffic on Virginia's highways.



Figure 2-1

BENEFITS OF RAIL SYSTEM IMPROVEMENTS

Improvements in the rail system offer many benefits:

The diversion of auto and truck traffic to rail would improve public safety and air quality by reducing congestion and greenhouse emissions, which affect climate change and health.

The diversion of air travel passengers to passenger rail would reduce congestion occurring in the nation's aviation system and provide a cost-effective and timely alternative for intercity travelers.

Improved passenger and freight rail service would help reduce the negative impacts to individuals and the economy of short or prolonged energy supply disruptions and/or energy price increases.

Land use and travel pattern changes for both passenger and freight movements would improve air quality, water quality and quality of life.

Rail improvements would provide mobility and economic development opportunities to smaller communities and rural areas with limited access to passenger or freight transportation.

The availability of an improved rail system would ensure a redundant transportation mode for use in emergency situations involving natural disasters, terrorist attacks and military response and readiness for war-time situations.

Passenger rail would provide a mobility option for individuals who cannot or choose not to drive or fly.

Freight rail would provide an option to companies who cannot or choose not to use trucks and the highway system for the transport of cargo.

- Relocating approximately 4.5 miles of existing rail lines owned by the Commonwealth Railway shortline from urban neighborhoods in Portsmouth and Chesapeake to the highway medians of Route 164 and I-664, a project due to be completed by late 2009. This corridor will be used to serve both the planned Craney Island Marine Terminal and the recently completed Maersk APM Terminal.

- ▣▣ Allocated more than \$200 million in public funds (General Funds and Rail Enhancement Funds) to support passenger rail improvements for intercity and commuter rail. Specific projects include the construction of a new railroad bridge over Quantico Creek on I-95 to remove the last single-track section of the Washington, DC to Richmond corridor and improvements that support current and expanded Amtrak operations throughout the Commonwealth.

Natural Resources, Environmental Influences, Land Use and Rail Transportation

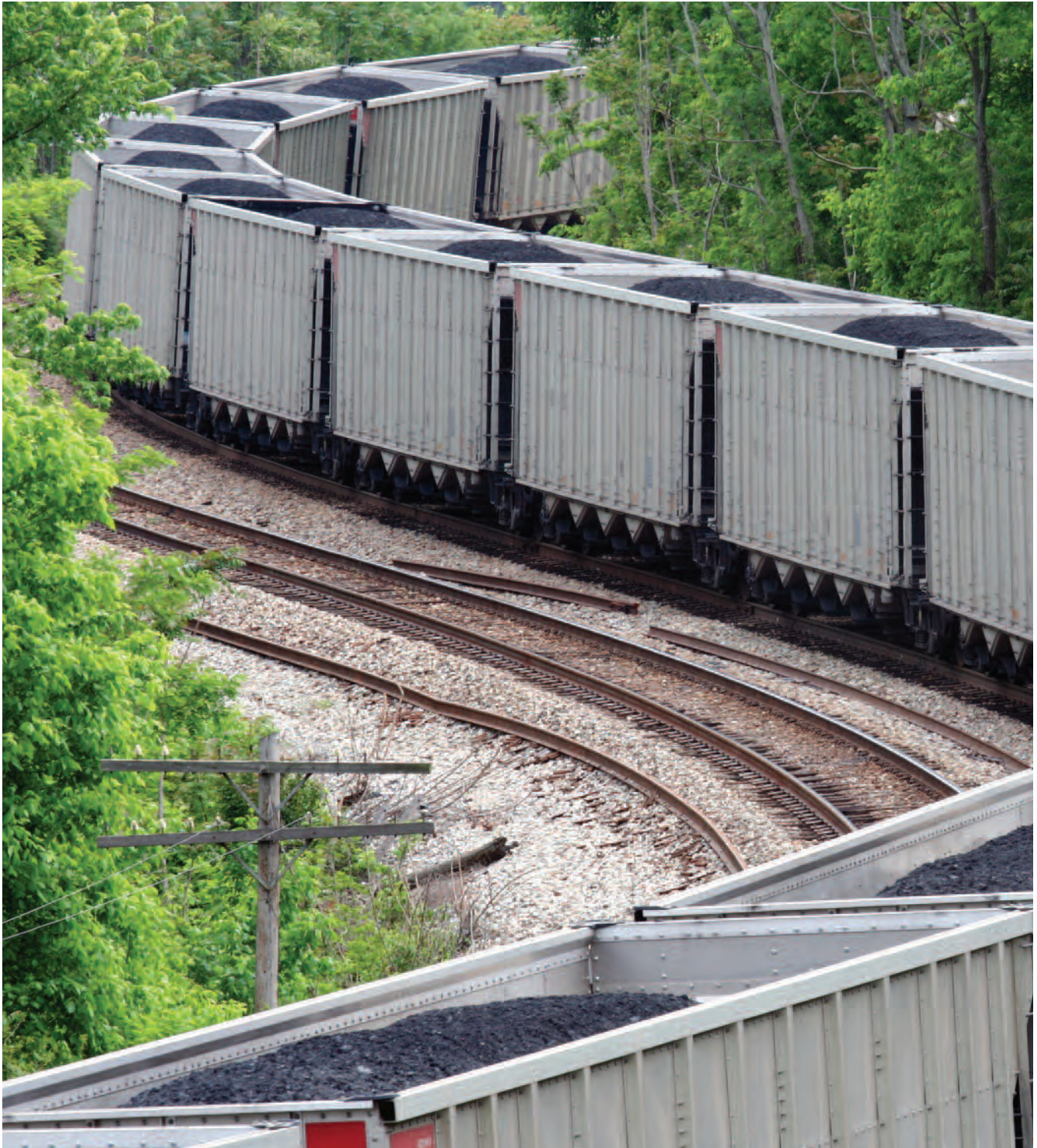
Natural Resources and Environmental Influences

According to the Association of American Railroads, greater use of freight and passenger rail offers a simple and relatively immediate way to reduce greenhouse gas emissions. The fuel efficiency of commuter rail is 27 percent greater than the automobile for passenger travel, Class I railroads are 90 percent more efficient than trucks for freight movement, and railroads have a smaller carbon footprint. Every ton-mile of freight that moves by rail instead of by truck reduces greenhouse emissions by at least 67 percent. Based on data from the American Association of State Highway and Transportation Officials, diverting just one percent of long-haul freight that currently moves by truck to rail would result in annual savings of 110 million gallons of fuel, and annual greenhouse gas emissions would fall by approximately 1.2 million tons. Benefits of improvements in the rail system are summarized in *Figure 2-1*.

Railroads are the most fuel efficient mode of ground transportation. In 2007, freight railroads moved a ton of

cargo an average of 436 miles for each gallon of fuel used. According to the Association of American Railroads, railroad fuel efficiency has risen 85 percent between 1980 and 2007, due to new locomotive technologies, advanced research and development, innovative operating practices, employee training and diligence in complying with

environmental laws and regulations. In 2007, Class I railroads used 3.5 billion fewer gallons of fuel and emitted 39 million fewer tons of carbon dioxide than they would have if their fuel efficiency and operating procedures had remained at 1980 levels.





An example of transit-oriented development at Preston Station in Houston, TX.

Land Use and Rail Transportation

Transportation investments and local land use decisions are integrally related. New development creates demand for enhanced transportation infrastructure and services. At the same time, transportation investments can help shape and direct growth. The Commonwealth has taken steps to improve coordination between transportation and land use over the past several years through traffic impact analyses and other initiatives.

Passenger rail stations and freight truck to rail intermodal facilities serve as anchors for more dense population and industrial development, which support more efficient travel patterns. As the Commonwealth works to implement the Statewide Rail Plan, it will evaluate state, regional and local transportation benefits and work to coordinate investments with local land use decisions. It is in the interest of the Commonwealth to ensure that complementary land uses accompany the investment of limited state resources. This coordination will help maximize the benefit of enhanced transportation infrastructure and services.

Investments in rail and transit will help provide the necessary infrastructure for local governments to consider alternatives to low density and inconsistent land use. In 2007, the General Assembly directed high growth local governments to establish urban development areas in their comprehensive plans by 2011. These growth areas are intended to accommodate reasonably dense development and the principles of new urbanism. These principles help to:

- Reduce reliance on the automobile;
- Create an integrated community atmosphere;
- Increase mobility and accessibility;
- Reduce crime;
- Increase economic vitality and sustainability; and
- Maximize public investment in infrastructure such as sewer, water, police and fire protection.

This type of walkable development will complement and help promote state transit and rail investments. High density housing can provide enough passengers for efficient passenger rail usage, and when rail and transit service is matched with appropriate land use, traffic congestion can be reduced.

The Commonwealth has implemented requirements to ensure that local and/or regional governments understand the impact of their land use decisions. In the development of the Draft Statewide Rail Plan, DRPT provided significant support to local governments regarding the potential transportation and economic benefits of dense, mixed-use development around multimodal passenger rail stations. There is no doubt that higher density development and land use will lead to increased usage of transit and passenger rail. Accordingly, local or regional governments that desire state assistance to construct multimodal stations must commit to land use that is supportive of the Commonwealth's goal to increase rail and public transportation usage.

Funding Rail in Virginia

Passenger and Freight Rail Capital Funding Sources

Virginia has several potential funding options for passenger and freight rail transportation. These options vary according to their source (private/railroad or public state, local and federal funds, as well as passenger fares), their use (stations, railcars, locomotives, right-of-way, operations and maintenance, etc.) and their availability (currently in use versus potentially available in the future).

Railroads

The railroads that operate in Virginia have willingly participated in the Commonwealth's programs through numerous public-private partnership projects. These projects have included initiatives focused on reducing truck traffic from the Port of Virginia as well as projects that benefit both freight and passenger rail along the I-95 and I-81 corridors. The Commonwealth's Rail

Enhancement Fund requires at least a 30 percent match from sources other than the Commonwealth or the federal government.

Commonwealth of Virginia Rail Programs

Four funding sources are specifically authorized to support the state's capital improvements on privately owned rail lines in Virginia. These are:

- ❖ The Rail Enhancement Fund
- ❖ Transportation Capital Project Revenue Bonds
- ❖ The Rail Preservation Fund
- ❖ The Rail Industrial Access Fund

The Rail Enhancement Fund is projected to provide approximately \$761 million in revenues for rail improvements between FY2010 and FY2035. Capital Project Bonds for rail improvements were established by





the General Assembly in 2007. The bond package includes a minimum of 4.3 percent of \$3 billion in available bond funds specifically for rail transportation. In total, at least \$129 million in capital project bond proceeds are anticipated for rail projects, with \$16 million already allocated to projects. However, the bonds can only be issued when there is demonstrated funding available for debt service. Together, approximately \$874 million in Rail Enhancement and capital bond funding will be available for capital projects over the next 25 years. Since the Fund requires a minimum of 30 percent in matching funds from private or other public sources, a minimum of \$375 million in matching funds will be available, resulting in a total of \$1.25 billion available for rail capital projects.

The Rail Resource Allocation Plan excludes Rail Preservation and Rail Industrial Access projects, program needs and revenues. DRPT has already allocated funds to shortline railroad improvements and rail industrial access improvements through the approved Six-Year Improvement Program. Any recommendations provided in the Rail Resource Allocation Plan do not affect either of these existing rail programs. State funding figures cited in this plan reflect those revenues anticipated to be available through the Rail Enhancement Fund and Transportation Capital Project Revenue Bonds only.

Other Commonwealth Transportation Funding Sources

In 2006, Section 33.1-23.1 of the Code of Virginia was amended and authorizes the Commonwealth Transportation Board to allocate up to 10 percent in available state highway construction funding to rail projects that mitigate highway congestion. Other provisions in the Code authorize localities to dedicate highway funding to rail projects.

There is no dedicated source of state funds available to meet the ongoing costs associated with intercity passenger rail operations.

Existing Federal Funding

The nature of the passenger rail service determines its eligibility for federal funding. The U.S. Department of Transportation classifies passenger rail services as either:

- Commuter rail service, which is funded by the Federal Transit Administration (FTA); or
- Intercity passenger rail service, which is funded by the Federal Railroad Administration (FRA).

In Virginia, only the passenger rail services operated by Virginia Railway Express meet the FTA definition of commuter rail service. VRE services are eligible for FTA funds under both the Section 5307 (urbanized area) and Section 5309 (fixed guideway modernization) federal programs that are used for transit capital projects. The FTA Section 5307 program provides up to 80 percent federal funding for planning, engineering design and evaluation of transit projects and other technical transportation-related studies, capital investments in bus and bus-related activities such as crime prevention and security equipment, construction of maintenance and passenger facilities and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications and computer hardware and software. The FTA Section 5309 program provides New Starts funding for any fixed guideway system which utilizes and occupies a separate right-of-way, or rail line, for the exclusive use of mass transportation and other high occupancy vehicles, or uses a fixed catenary system and a right-of-way usable by other forms of transportation. This includes, but is not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers and exclusive facilities for buses (such as bus rapid transit) and other high occupancy vehicles.

Until recently, there was no federal funding program to assist states with intercity passenger rail projects. In January 2008 the FRA announced a new Capital Assistance to States - Intercity Passenger Rail Service program. The program made \$30 million in federal matching funds available directly to states through grants to fund up to 50 percent of the cost of capital investments and planning activities necessary to achieve tangible improvements for existing or expanded intercity passenger rail service. In October 2008 Virginia received \$2 million in federal grant funds to offset the cost of completing projects in the I-95 rail corridor that will support increased intercity passenger rail service from Richmond to Washington, DC.

Congestion Mitigation Air Quality (CMAQ) and Surface Transportation Program (STP) funding programs have specific application to both capital project elements of passenger rail service expansion (CMAQ and STP) and the start-up costs associated with operations in the first three years (CMAQ). By law, the Commonwealth provides the 20 percent match that is generally required by these federal programs.

Figure 3-1

H.R. 2095 AUTHORIZATION LEVELS - NEW FEDERAL FUNDING

H.R. 2095 Authorization Levels					
Section and Title	FY2009	FY2010	FY2011	FY2012	FY2013
Sec. 3 - Rail Safety	\$225M	\$245M	\$266M	\$289M	\$293M
Sec 105 - Rail Safety Technology Grants	\$50M	\$50M	\$50M	\$50M	\$50M
Sec. 206 - Operation Lifesaver		\$2M	\$2M	\$1.5M	\$1.5M
Sec. 207 - Federal Grants to States for Highway-Rail Grade Crossing Safety		\$3M	\$3M	\$3M	\$3M
Sec. 418 - Railroad Safety Infrastructure Improvement Grants		\$5M	\$5M	\$5M	\$5M
Sec. 301 - Capital Assistance for Intercity Passenger Rail Service	\$100M	\$300M	\$400M	\$500M	\$600M
Sec. 302 - Congestion Grants		\$50M	\$75M	\$100M	\$100M
Sec. 304 - Tunnel Project (Baltimore)	\$60M (FY09-13)				
Sec. 305 - Next Generation Corridor Train Equipment Pool		\$5M			
Sec. 306 – Rail Cooperative Research Program		\$5M	\$5M	\$5M	\$5M
Sec. 501 - High Speed Rail	\$150M	\$300M	\$350M	\$350M	\$350M

There are other limited federal funding sources that can support some capital expenses for passenger rail transportation and rail relocation. These include historic preservation funds, funding for security upgrades and funding for improvements to grade crossings.

Finally, some funding may be available to Virginia from Amtrak's general capital budget. Amtrak has mandatory station upgrades required under the Americans with Disabilities Act that may contribute to some of the proposed station upgrades. In addition, if Amtrak's general capital budget were increased, Virginia would be prepared to make the case for investments and improvements within the state and to help encourage federal funding with the availability of state resources.

New Federal Funding

H.R. 2095 - the Federal Railroad Safety Improvement Act

The Federal Railroad Safety Improvement Act, signed into law in October 2008, authorizes significant additional federal funding for intercity passenger rail service, high speed rail development and corridor development. It also reauthorizes and strengthens rail safety programs, including a requirement for rail companies to equip locomotives with positive train control systems to help avoid collisions.

H.R. 2095 authorizes \$12.9 billion over five years including \$5.3 billion in rail capital grants, \$2.9 billion in rail operating grants and \$1.9 billion for a new state grant program for intercity passenger rail development. Under the new state grant program, federal funding will be available to pay for the capital costs of facilities and equipment necessary to provide new or improved intercity passenger rail service. Commuter rail is not eligible for funding under this grant program. The U.S. Secretary of Transportation will award these grants on a competitive basis to specific projects based on economic performance, expected ridership and other factors.

While H.R. 2095 authorizes funding, no funding has been appropriated. In order for funding to be made available to grantees, Congress must appropriate funding each year. The actual annual outlays in any given fiscal year are expected to be less than the authorization amounts set in H.R. 2095. The federal share of net capital costs for approved and authorized projects cannot exceed 80 percent. For Section 301—Capital Assistance for Intercity Passenger Rail Services—the federal government may make available a credit amount not exceeding \$15 million per fiscal year to be used toward the applicant's matching amount. The authorized funding levels are summarized in *Figure 3-1*.

The Commonwealth will aggressively seek grants to support the cost of implementing eligible elements of the recommended projects identified in this plan.

Existing Local Funding

Local jurisdictions usually prefer to have ownership of assets and to see clear local public benefit and equitable cost sharing before they are willing to invest local revenues in transportation projects. For this reason, passenger rail/multimodal stations often represent the best opportunity for utilization of local funding in developing a capital plan for passenger rail expansion. Local funds can be used for the initial purchase or lease of a pre-existing station or land, for station construction and renovation, for construction of parking and for ongoing station expenses (cleaning and maintenance, security, etc.). The investment of local funds in passenger rail programs is considered critical as it creates a greater sense of ownership, increasing the likelihood of finding successful solutions to land use and operational issues related to service frequency and expansion. Through the application of transit-oriented development principles, local investment can spur the development of creative, multi-use destinations and additional economic development, as well as offer the potential for the creation of multimodal links such as airports or intercity bus terminals.

Some Northern Virginia jurisdictions use local general funds to assist in the implementation and ongoing operations of VRE service, including a regional gas tax. However, local jurisdictions often need to consider alternatives to city or county general funds, which can be used for a broad range of public purposes and are often consumed by competing needs (public safety, health, schools, etc.). Alternative funding vehicles available for passenger rail capital and operating costs include:

- Private sector partnerships, either through an economic development district or through the joint development of parking or retail.
- A special assessment district.
- Tax Increment Financing, which involves the issuance of debt against future increased tax revenues, resulting from stimulated economic investment which creates increased property values.
- Utilizing a portion of a local jurisdiction's allocation of state highway funds under the Urban or Secondary Roads program to support passenger rail projects, although these funding sources are currently highly constrained.

In Virginia's largest urbanized areas, local jurisdictions also play a role in the use of certain federal funds that are programmed at the regional level through Metropolitan Planning Organizations (MPOs). The MPOs may program certain federal highway allocations to help fund rail capital improvements such as station improvements.

Passenger Fares

Fare revenues are generally used to defray a portion of passenger rail operating costs. As with transit service everywhere else in the country, both commuter and intercity rail require a subsidy to support ongoing capital and operating costs. The subsidy amount required varies based on the type of service desired. DRPT will recommend a fare goal that will support the achievement of 40 to 50 percent recovery of operating expenses through customer fares.

Leveraging Rail Funding

As mentioned earlier, in 2007 the Commonwealth of Virginia authorized the use of state bond proceeds for rail capital projects for the first time. The use of debt financing provides an opportunity to finance projects earlier but requires payback over a long period of time – typically 20 to 30 years. As the eight recommended projects proceed through the project development life cycle, additional debt financing may be considered. However, any additional Commonwealth debt must compete against other Commonwealth programs. In addition, projects currently in planning and engineering must be better defined, scheduled and estimated before any additional debt should be considered. Lastly, agreements committing other project partners to these projects and their funding participation would be necessary.

There are also federal debt financing programs for rail projects. The Federal Railroad Administration (FRA) administers the Railroad Rehabilitation and Improvement Financing (RRIF) program, which provides direct federal loans and loan guarantees to finance the development of railroad infrastructure. Under this program, the FRA is authorized to provide direct loans and loan guarantees totaling \$35 billion. These loans can fund up to 100 percent of a railroad project with repayment periods of up to 25 years and interest rates equal to the cost of borrowing to the government. Eligible borrowers include railroads, state and local governments and government-sponsored authorities and corporations. Virginia Railway

Express received a RRIF loan of \$72.5 million to finance the purchase of fifty railcars in 2007.

Under the RRIF program, the Commonwealth could obtain financing if authorized by the General Assembly or it could request that its project partner obtain the loan from the FRA and agree to separate terms with the Commonwealth for funding the repayment. This latter option is also a consideration for financing projects involving the Class I railroads, under which the railroad would finance the project utilizing its traditional debt financing if the RRIF was not available.

Another federal funding program, the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA), is a federal credit program for eligible transportation projects of national or regional significance. By providing direct loans, loan guarantees and standby lines of credit, the program's primary goal is to leverage federal funds by attracting substantial private and other non-federal co-investment in critical improvements to the nation's surface transportation system. Required payment revenues are from tolls, user fees or other dedicated revenue sources.

Under the TIFIA program, the Commonwealth or its partners could participate in:

- securing funding for rail projects involving the design and construction of intercity passenger rail facilities or the procurement of intercity passenger rail vehicles;
- public freight rail facilities, private facilities providing public benefit for highway users, intermodal freight transfer facilities, projects that provide access to such facilities and service improvements (including capital investments for intelligent transportation systems) at such facilities and;
- projects located within the boundary of a port terminal, as long as the project is limited to only those surface transportation infrastructure improvements for direct intermodal interchange, transfer and access in and out of the port.

The advancement of a series of projects that constitute a major rail corridor development initiative requires the consensus of all parties involved in the design, construction and funding of the projects. The state, the railroads and other project partners involved in projects for which federal funding will be sought, in addition to the FRA, need to be in full agreement as to the scope, schedule and costs of the projects and how the projects will be funded. Initially, the railroads and the state need to come to agreement on the scope, schedule and approach to project delivery, including the determination of the project lead and how the costs of the project will be shared between the public and private sectors.

DRPT will negotiate such agreements with each railroad for major corridor development projects. Once agreement has been reached between the state and the railroad, it is important for the state to approach the FRA with a proposal for federal participation in the corridor development initiative. If the FRA agrees with the plan and cost sharing proposal for the corridor development initiative, the state and FRA can enter into a Project Development Agreement. The Project Development Agreement approach has been used by the Federal Transit Administration (FTA) for major transit development initiatives under the FTA New Starts Program. A Project Development Agreement does not bind either party to funding a project but it sets out the parameters which, if met, will lead to the execution of a successful federal grant agreement.

A Project Development Agreement identifies the improvements to be made, the schedule on which the projects will be advanced, including milestones to be met, the tasks to be completed and which parties will be responsible for each task, any issues regarding governance or finance that must be resolved and how that resolution will take place and how the costs of the projects will be shared. Once a Project Development Agreement has been executed, the state will submit grant applications to FRA for individual projects in accordance with the plans and schedules set out in the Agreements with the expectation that, subject to the availability of federal funding, the grant requests will be approved. It is the intent of DRPT to approach the FRA with the proposal of Project Development Agreements for the major corridor projects contained in this Plan.

Rail Project Prioritization and Funding Plan

This chapter outlines the results of the project prioritization process for the \$6.6 billion in capital needs resulting from projects that were identified in the Draft Statewide Rail Plan. These projects will help the Commonwealth meet the goal of moving people and goods efficiently and effectively.

The first step of the process was to assess each project against the Commonwealth Transportation Board's established policy goals that guide rail project funding decisions (**Appendix A**). The second step was to analyze the funding requirements associated with implementing the \$6.6 billion in capital projects and the additional



Figure 4-1

RECOMMENDED PRIORITIZATION OF RAIL PROJECTS (CAPITAL COSTS ONLY)

Project and Priority		Total Cost In Millions 2008 \$	Supports Moving People & Goods	Meets CTB Goals	Implements Within Proposed FY09-FY15 Plan	Includes Elements Eligible for Federal Rail Programs
I-95/I-64 Transportation Corridor		\$5,527.4				
I-95/I-64 Intercity Passenger Rail Service		3,580.7				
Phase I	C	215.5	●	●	●	●
Phase II	C	406.8	●	●	○	●
Phase III	P	91.0	●	●	○	●
Phase IV	C	231.3	●	●	○	●
Phase V	C	2,636.1	●	●	○	●
Commuter Rail		41.0				
Phase I	C	5.0	●	●	●	●
Phase II	C	36.0	●	●	○	●
Southeast High Speed Rail (SEHSR)		1,717.7				
Phase I	P	4.0	●	●	●	●
Phase II	P	1,601.2	●	●	○	●
Phase III	P	112.5	●	●	○	●
National Gateway		188.0				
Phase I	C	135.7	●	●	●	●
Phase II	C	5.9	●	●	○	NA
Phase III	F	46.4	●	●	○	NA
I-81 Transportation Corridor		\$987.2				
I-81/Route 29 Intercity Passenger Rail Service		210.6				
Phase I - Lynchburg	C	40.7	●	●	●	●
Phase II - Roanoke	C	105.9	●	●	○	●
Phase III Bristol & IV - Richmond	C	64.0	●	●	○	●
Commuter Rail		262.4				
Phase I	C	13.2	●	●	●	NA
Phase II	C	161.0	●	●	○	NA
Phase III	P	88.2	●	●	○	NA
Crescent Corridor		514.2				
Phase I	F	38.0	●	●	●	●
Phase II	F	82.2	●	●	○	●
Phase III	C	394.0	●	●	○	●
Route 460 Transportation Corridor		\$27.7				
Heartland Corridor		27.7				
Phase I	F	18.1	●	●	●	NA
Phase II	F	9.6	●	●	○	NA
Port Related Projects		\$64.1				
Port of Virginia		64.1				
Ports Phase I	F	2.2	●	●	●	●
Ports Phase II	F	41.7	●	●	○	NA
Ports Phase III	F	20.2	●	●	○	●
TOTAL		\$6,606.4				

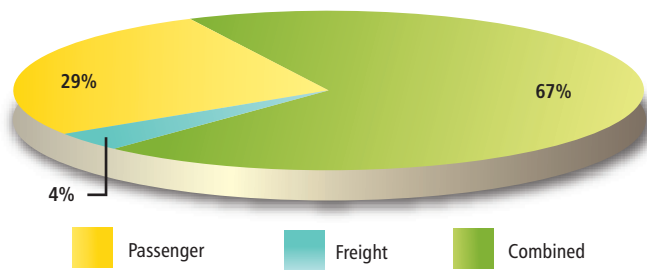
● Meets requirements or can be achieved during planning period.

○ Does not yet meet the requirements, cannot be achieved during the planning period.

P Passenger Rail
 F Freight Rail
 C Combined

Figure 4-2

PROJECT DISTRIBUTION BY TYPE OF SERVICE BENEFIT



operating costs for new intercity passenger rail services (*Appendix B*). The Commonwealth's Rail Enhancement Fund and available revenues and bonds are expected to generate approximately \$874 million in public funds to support projects over the next 25 years. With the inclusion of local matching funds, approximately \$1.25 billion is available over the next 25 years. Other public and private

entities control much of the planning, design, schedule and funding for these projects. The third step was to divide the eight discrete projects into 27 phases that could be implemented based on the policies and priorities established by the Commonwealth and funding limitations. *Figure 4-1* summarizes the results of these steps. *Figure 4-2* outlines the type of services that benefit from the projects. Nearly 70 percent of the projects identified will improve both passenger and freight rail, a priority identified in the Draft Statewide Rail Plan. The fourth step was the development of a Proposed FY2009 – FY2015 Improvement Plan that allocates funding to the Commonwealth's top priority projects. The Proposed FY2009-FY2015 Improvement Plan is a state and local funding only scenario and does not include federal funding for rail projects. Projects with elements identified as potential candidates for federal funding have been identified in *Figure 4-1*.

Appendix C provides a detailed description of each of the projects.



Figure 4-3

CONSTRAINED SIX-YEAR IMPROVEMENT PLAN (CAPITAL AND OPERATING COSTS) – STATE SHARE FY 2010-2015 (2008 \$ IN MILLIONS)

Fiscal Year	Previously Allocated FY2009	Proposed for Allocation 1/21/09 2009	2010	2011	2012	2013	2014	2015	Total State Share	Total Cost
I-95/I-64 Passenger Rail Phase I - Richmond New passenger rail service from Staples Mill to Washington, DC. Requires station improvements and shared cost of trainset rehabilitation with Lynchburg service, improves passenger and freight train efficiencies in Richmond by making improvements to Acca Yard and completes Richmond to Doswell Environmental Assessment	\$13.4	\$6.2	\$52.0	\$13.1	\$6.0	\$7.2	\$22.9	\$31.9	\$152.7	\$215.5
Commuter Rail Improvements Phase I Installs Automatic Train Control from Alexandria to Washington and makes limited track upgrades to same area; completes final design for Cherry Hill Third Track and preliminary engineering for Gainesville Haymarket VRE service	7.2	0	0.6	0.1	2.1	1.7	0.6	0.0	12.3	18.2
I-81/Route 29 Intercity Passenger Rail Phase I - Lynchburg New passenger rail service from Lynchburg to Washington, DC. Requires limited station/area improvements and shared cost of trainset rehabilitation with Richmond service, Route analysis Roanoke to Bristol and Lynchburg to Richmond, constructs Nokesville to Calverton double track for increased capacity	0	7.7	0.0	4.0	6.3	6.3	6.3	0.0	30.6	40.7
National Gateway Phase I Remove five bridge obstructions and constructs a New Virginia Avenue Tunnel	0	0	0.0	2.7	6.0	5.3	5.4	5.6	25.0	135.7
Heartland Corridor Phase I Relocate Cove Hollow Road at Elliston intermodal facility, Fully Funds Phase I Plus Contingency	4.4	8.3	0.0	0.0	0.0	0.0	0.0	0.0	12.7	18.1
Ports Phase I Preliminary Engineering for NIT on-dock rail yard and off site Belt Line marshalling yard	0.8	0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.2
Crescent Corridor Phase I Provides Preliminary Engineering and construction of top four projects in Berryville, Elkton, Bentonville & Stanley and completes Manassas to Front Royal improvements	0	2.9	0.0	3.6	10.0	10.1	0.0	0.0	26.6	38.0
Southeast High Speed Rail Phase I Completes Tier II EIS from Main Street Station to Raleigh, NC	0.8	0	0.8	0.7	0.0	0.0	0.0	0.0	2.3	4.0
Total Project Capital Cost	\$26.6	\$25.1	\$53.4	\$24.2	\$30.4	\$30.6	\$35.2	\$37.5	\$263.0	\$472.4
Three Year Passenger Rail Demonstration Project Operating Cost*	\$-	\$-	\$5.4	\$5.7	\$6.1	\$-	\$-	\$-	\$17.2	\$17.2
Total Project Cost	\$26.6	\$25.1	\$58.8	\$29.9	\$36.5	\$30.6	\$35.2	\$37.5	\$280.2	\$489.6

* A new source of dedicated funding is needed to sustain service.

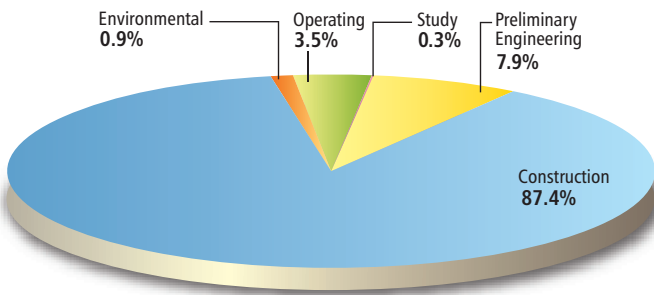
The Proposed FY2009 - FY 2015 Improvement Plan is based on existing revenues with contribution(s) from public and/or private sources to support completion of projects on a pay as you go basis. This proposed funding plan assumes that projects will be implemented incrementally and utilizes available Commonwealth funding sources of \$280.2 million. State participation includes \$249 million in Rail Enhancement Funds and \$14 million in VTA 2000 funds

that will be available between FY2009 and FY2015. Matching funding of \$209.4 million will be provided by other public and/or private sources.

Figure 4-3 illustrates the recommended allocation of the state share of total project costs to the various project activities included in the Proposed FY2009 – FY2015 Improvement Plan.

Figure 4-4

CONSTRAINED SIX-YEAR IMPROVEMENT PLAN TOTAL COST PERCENTAGE BY PROJECT ACTIVITY



Additionally, the Commonwealth would provide \$17.2 million for a three-year intercity passenger rail demonstration service at the beginning of FY2010. The demonstration project would provide an opportunity for the evaluation of service performance, including funding factors such as farebox recovery, and the identification of a permanent passenger rail operations funding source for future years.

Figure 4-4 illustrates the percentage of total costs that would be devoted to the completion of studies, environmental reviews, engineering activities and construction under the Proposed FY2009-FY2015 Improvement Plan.

In summary, the Proposed FY2009 – FY 2015 Improvement Plan:

- Advances two three-year intercity passenger rail demonstration projects that will operate new daily round trip passenger rail service between Lynchburg and Washington, DC and Richmond and Washington, DC.
- Supports capacity studies, environmental reviews, preliminary engineering and construction of certain project elements on the I-81, I-95, I-64 and Route 29 corridors to support increased passenger and freight rail operations.
- Advances the implementation of an automatic train control system between Arlington and Washington, DC. As a result of this project, passenger and freight trains traveling along the entire I-95 corridor between Richmond and Washington, DC will be able to be automatically and safely stopped, reducing potential accidents between trains sharing the same track(s).
- Advances planning and engineering of the extension of Virginia Railway Express service from Manassas to Gainesville and Haymarket.
- Completes the Tier II Environmental Impact Statement of the Southeast High Speed Rail Corridor from Richmond to Raleigh, NC and the Tier I Draft Environmental Impact Statement from Richmond to Hampton Roads.
- Assists in the design of rail projects to support increased diversion of freight to rail at the Port of Virginia.



Next Steps

DRPT intends to advance the projects identified in an iterative manner, focusing on a sufficient level of project readiness before entering into project funding agreements. For the Rail Resource Allocation Plan, DRPT retained the categorization and implementation phasing of projects by transportation corridor used in the Draft Statewide Rail Plan. DRPT's project recommendations are based on currently available information about each project, with the following important considerations:

- Many of the project elements are early in the development process and still must proceed through planning, environmental review and engineering. Therefore, they do not have fully developed project scopes and costs. As a result, a significant cost contingency has been added to the construction cost estimates.
- As project development proceeds, project elements may undergo significant scope changes and/or cost escalation prior to the calculation of final cost estimates.
- The implementation of certain projects may be subject to the completion of multi-state agreements or agreements between railroads and the Commonwealth, which may also impact project timing and cost.
- DRPT will negotiate Project Development Agreements with each railroad for major corridor development projects. Once agreement has been reached between the state and the railroad, DRPT will approach the FRA with a proposal for federal participation in the corridor development initiative.

Figure 4-5

PROJECT IMPLEMENTATION TIMELINE FOR PROPOSED CAPITAL PROJECTS

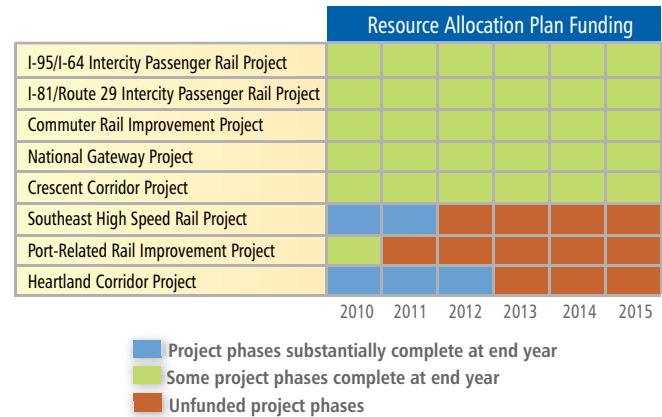


Figure 4-5 provides conceptual timelines for the implementation of the capital projects in the Proposed FY2009 - FY2015 Improvement Plan. Since some projects will require additional capital investment beyond the investments contemplated in this plan, projects have been color coded for status at the end year. These figures do not include the operating costs for passenger rail service, which will represent ongoing costs.

Appendix C provides a detailed description of each of the projects, utilizing a corridor approach.

Appendix A

Commonwealth Transportation Board Rail Enhancement Fund Policy Goals

Rail Enhancement Fund policy Goals 1, 2, 3 and 5 below are minimum policy criteria for project consideration. Compliance with the following minimum criteria must be demonstrated before further consideration will be given to funding a project.

1. Projects will provide an additional or accelerated investment in Virginia rail projects, which are determined to have a substantial public benefit equal to or greater than the public investment.
2. Projects will address the needs identified in the applicable state, regional and/or local plans, developed in consultation with public and private partners.
3. Projects will encourage competition and economic development by promoting, or not precluding, access by more than one rail operator and whenever possible joint access by freight and passenger operators to optimize the Commonwealth's investment.
4. The use of Rail Enhancement Funds will evolve from a focus on quick turn-around, high impact projects to a multi-year strategic program of projects that leads to an integrated six-year passenger and freight rail improvement program.
5. The Program will limit long term Commonwealth funding liability through the development of achievable project schedules and budgets. Consideration will be given to funding major projects over a period of several years.
6. Where feasible, projects will optimize public benefits by leveraging funds from sources other than the Rail Enhancement Fund.
7. Projects will protect the Commonwealth's public interest in private facilities.
8. Projects will contribute to the effectiveness of the entire transportation system.
9. At least 90 percent of program funds will be spent on capital improvements.

Appendix B

Statewide Rail Resource Allocation Plan

Funding Analysis

Long-Term Capital Funding Analysis

The state's share of the \$6.6 billion in total costs for the recommended projects cannot be funded on a pay as you go basis using just the Rail Enhancement Fund and transportation bonds. Significant annual shortfalls occur when the existing revenues that total approximately \$874 million through FY2035 are compared to the estimated eligible \$4.4 billion state share of the total project costs in 2008 dollars. The Commonwealth would likely need to increase funding if the goal is to fully implement the eight prioritized projects and/or consider alternative funding strategies, including federal funding, to advance elements of the prioritized projects. For example, in the Amtrak Northeast Corridor, 80 percent federal funding participation is provided.

Long-Term Operating Need

Amtrak provides state-supported passenger rail service in 14 states, generally offering a turnkey operation that may

include rolling stock, on-board operating crews, station staff, management and administrative support, maintenance of equipment, maintenance of way (tracks and signals), marketing and advertising, reservation sales and ticketing. These services are provided to the state transportation agency or other relevant authority at costs based on services rendered. In total, state-supported services comprise approximately 45 percent of Amtrak's average weekday departures. Legislative directives and current funding levels preclude Amtrak from operating additional services unless the required subsidy to operate those services is funded by the state. Therefore, any expansion of passenger rail service in Virginia would have to be state supported after passenger fares are considered.

In total, the FY2010 operating subsidy requirement for initial phases of the I-95/I-64 and the I-81/Route 29 intercity passenger rail services is estimated to be approximately \$5.4 million. Assuming full operations with nine trains in the corridors, the annual subsidy rises from \$5.4 million in FY2010 up to an estimated \$174 million by FY2035. *Figure B-1* presents the estimated annual operating subsidy requirements for the proposed intercity passenger rail initiatives.

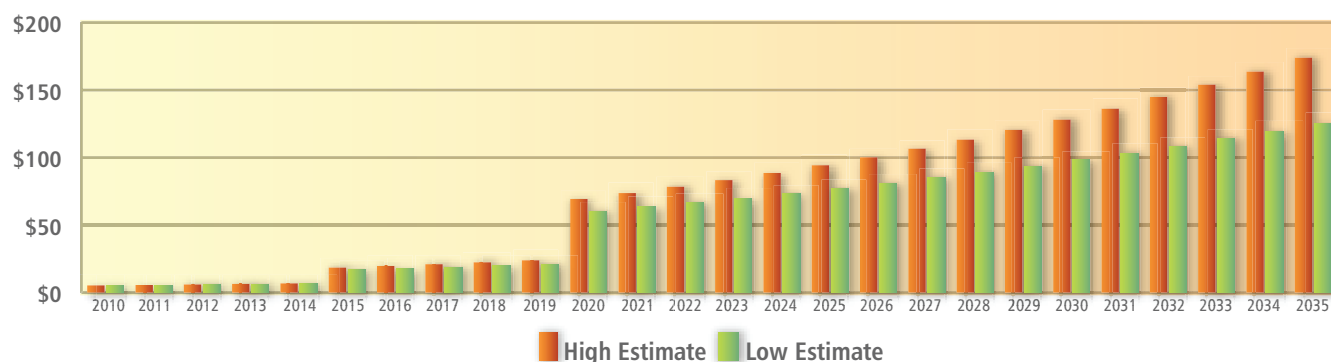
Proposed Intercity Passenger Rail Corridor Enhancements

For additional intercity passenger rail service to operate in the Commonwealth, significant capital improvements are needed on Virginia's rail lines. Many of the identified improvements in this Plan are in the early stages of analysis and planning, and final costs and schedules are not yet available. This Plan proposes to fund completion of the necessary analysis and planning to better define the capital and operating funding needs. Upon completion of this analysis and planning, the Commonwealth Transportation Board, Governor and General Assembly will need to revisit this Plan.



Figure B-1

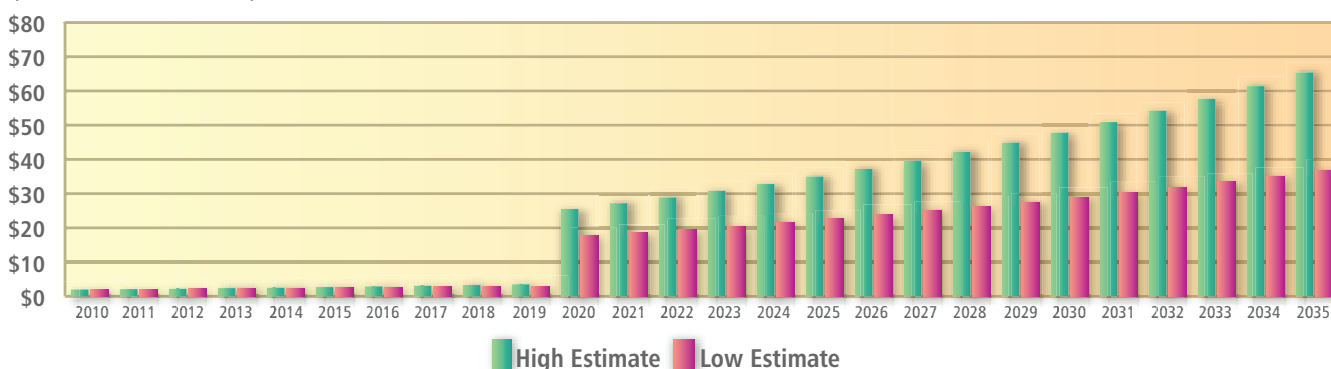
**ESTIMATED INTERCITY PASSENGER RAIL OPERATING FUNDING REQUIREMENTS FOR RECOMMENDED PROJECTS
(2008 \$ IN MILLIONS)**



Operating costs are expressed in a range based on ridership estimates.

Figure B-2

**ESTIMATED INTERCITY PASSENGER RAIL OPERATING FUNDING REQUIREMENTS FOR THE I-95/I-64 CORRIDOR
(2008 \$ IN MILLIONS)**



Operating costs are expressed in a range based on ridership estimates.

I-95/I-64 Intercity Passenger Rail Service

Today, Amtrak operates two daily round trip intercity passenger trains in the I-95/I-64 corridor between Newport News and Washington, DC and two daily round trip intercity passenger trains between Richmond and Washington, DC, with connecting service to the Northeast Corridor. Assuming full project implementation in FY2020 and equipment availability, the I-95/I-64 Intercity Passenger Rail Service will shift terminal regional operations to Newport News and utilize a total of nine round trip trains to provide daily half-hour train service during peak periods between Newport News and Washington, DC. At full operations, the annual operating subsidy rises from \$2 million in FY2010 to as much as \$65.4 million by FY2035.

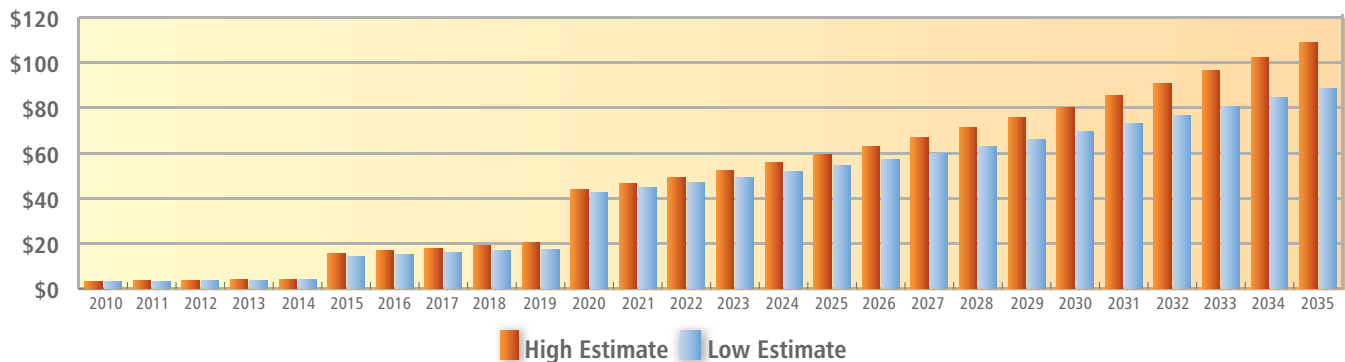
Figure B-2 presents the estimated annual operating subsidy requirements for the I-95/I-64 Intercity Passenger Rail Service.

I-81/Route 29 Intercity Passenger Rail Service

Today, Amtrak operates daily Crescent and three day a week Cardinal intercity train service in the Route 29 corridor. There is currently no intercity service between Lynchburg and Bristol and between Bristol and Richmond. At project implementation between Bristol and Washington, DC, the I-81/Route 29 Intercity Passenger Rail Service will provide one round trip daily train between Bristol and Washington, DC and one daily round trip train between Roanoke and Washington, DC. Assuming full

Figure B-3

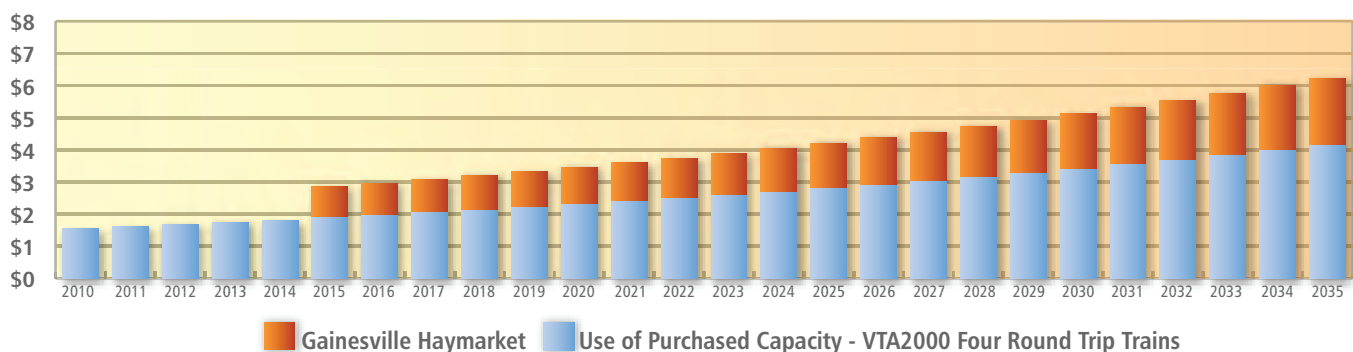
ESTIMATED INTERCITY PASSENGER RAIL OPERATING FUNDING REQUIREMENTS FOR THE I-81/ROUTE 29 CORRIDOR (2008 \$ IN MILLIONS)



Operating costs are expressed in a range based on ridership estimates.

Figure B-4

ESTIMATED COMMUTER RAIL OPERATING FUNDING REQUIREMENTS FOR THE ADDITION OF FOUR WEEKDAY TRAINS ON EXISTING LINES AND EXPANSION FROM MANASSAS TO GAINESVILLE/HAYMARKET (2008 \$ IN MILLIONS)



operations, the annual operating subsidy rises from \$3.3 million in FY2010 to as much as \$108.7 million by FY2035. **Figure B-3** presents the estimated annual operating subsidy requirements for the I-81/Route 29 Intercity Passenger Rail Service.

Operating Needs for Commuter Rail Service Expansion

As a matter of policy, VRE sets its fares so that passenger revenues recover 50 percent of VRE's operating costs. The remainder of its operating costs must be funded from VRE's other operating revenue sources, such as funds from the Mass Transit Trust Fund and contributions from VRE's member jurisdictions. At present, VRE could not finance either the capital or operating costs associated with future

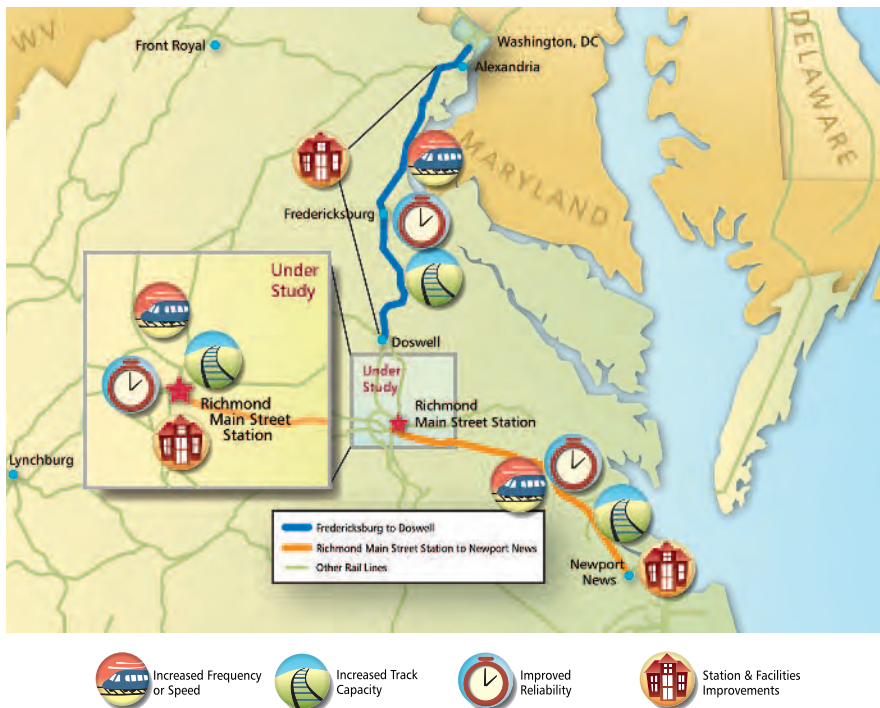
service expansions such as Manassas to Gainesville/Haymarket. Assuming full operations for the service expansions, VRE's annual operating subsidy needs would increase above the current level by \$1.5 million in FY2010 to an estimated increase of \$6.2 million by FY2035. **Figure B-4** shows estimated commuter rail operating funding requirements for the addition of four trains on existing lines and the expansion of the Manassas to Gainesville/Haymarket service from FY2010-FY2035. The recommended intercity passenger rail service enhancements in this Plan will complement VRE service by offering increased ridership opportunities through passenger stops at designated VRE stations. This effort will provide greater passenger rail capacity in the corridor and ease potential overcrowding of existing VRE trains.

Appendix C

Detailed Description of Recommended Projects



I-95/I-64 Intercity Passenger Rail Project



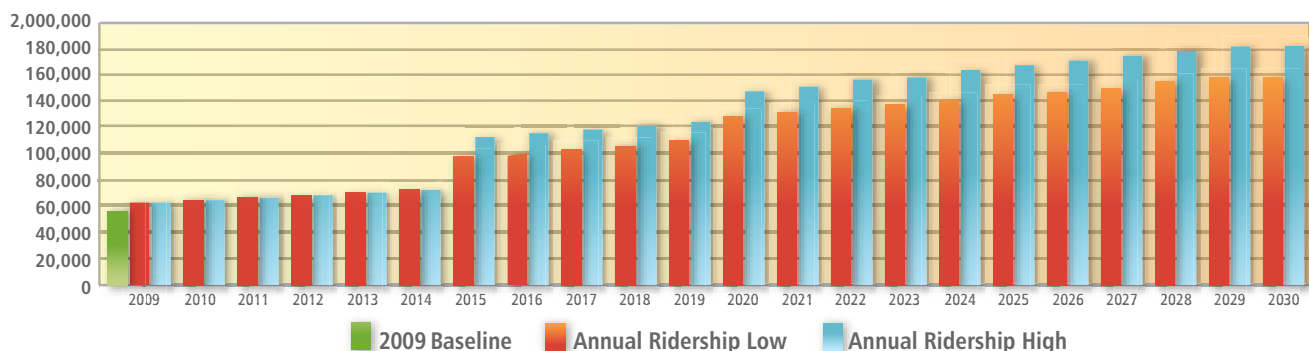
KEY FACTS

- The I-95/I-64 transportation corridor connects major Virginia population and employment centers and contributes significantly to the Commonwealth's economy.
- This project will provide highway congestion relief and increase transportation choices through freight and passenger rail improvements between Washington, DC, Richmond and Newport News.
- With the majority of the state's population and employment centers along this corridor, the I-95/I-64 Intercity Passenger Rail Project presents the best opportunity for increasing rail ridership in the Commonwealth.
- Annual Amtrak ridership in this corridor totaled 531,000 in 2007. This project could increase ridership by a minimum of more than 80 percent (980,700) up to more than 110 percent (1,130,400) in seven years (2015). By 2030, ridership could increase to between 1,570,100 and 1,817,600 passengers per year.

The I-95/I-64 Intercity Passenger Rail Project will:

- Enhance passenger and freight rail operations with more frequent service, capacity and travel time savings between Hampton Roads, Richmond and Washington, DC, including service to the Northeast Corridor.
- Construct or expand passenger rail stations to provide multimodal connections and encourage transit-oriented development.
- Improve passenger platforms at Richmond's Main Street Station to accommodate long distance Amtrak trains and increase customer access.

I-95/I-64 INTERCITY PASSENGER RAIL PROJECT ANNUAL RIDERSHIP PROJECTIONS 2009-2030 (SEVEN DAY SERVICE)



* 2009 Implement new State funded train between Staples Mill Station, Richmond and Washington, DC ** 2015 Improvements completed to originate 5 regional trains at Newport News
 ***2020 Originates 9 regional trains at Newport News

Project Management

- DRPT will complete a federal Environmental Assessment to determine the service route between Main Street Station in Richmond and Doswell for potential high-speed rail service.
- The Commonwealth, Amtrak, CSX and VRE will coordinate all project-related rail improvements and operations.
- The project will be managed through a public-private partnership between the Commonwealth, CSX, Amtrak and federal partners.

Project Phasing

Phase I

Capacity/Station Improvements

*\$215.5 M total project cost (\$152.7 M state)**

- One new daily round trip train from Richmond to Washington, DC as a demonstration project for three years beginning in FY2010, station improvements at Staples Mill Station and the rehabilitation of one train set.
- Design and construction of capacity improvements from Washington, DC to Richmond and Newport News, including third main track sections and enhancements to increase on-time performance.
- Completion of environmental study to select the route for future high speed passenger trains between Richmond and Doswell, as required in the federal planning process.

Phase II

Regional Trains to Newport News

*\$406.8 M total project cost (unfunded)**

- Complete capacity improvements from Phase I and extend three regional trains from Staples Mill Station to Newport News for a total of five daily trains to serve Newport News, Richmond and Washington, DC. Enhance passenger rail stations.

Phase III

Additional Trains/Rolling Stock

*\$91 M total project cost (unfunded)**

- Four additional trains with half-hour service between Newport News, Richmond and Washington, DC for a total of nine daily trains.

Phase IV

Reroute Long Distance Trains

*\$231.3 M total project cost (unfunded)**

- Capacity improvements between Centralia and Main Street Station to allow long distance trains to serve Main Street Station. New service to Caroline County and other station improvements.

Phase V

New Bridge/Track Capacity

\$2,636.1 M total project cost (unfunded)

- Bridge capacity improvements between Newport News and Washington, DC, including a new Potomac River bridge.
- Connect third track sections in the I-95 corridor and second main line sections between Richmond and Newport News.

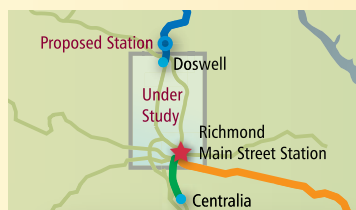
Project Finance

Total project cost: \$3,580.7 million (\$2008)

- Proposed FY2009 – FY2015 Improvement Plan– \$215.5 M total project cost for Phase I to be completed from FY09-FY15 (\$152.7 M state).
- Phases II, III, IV and V are unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- Project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources.
- Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners. All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

**All marked items require operating funds in addition to the capital costs noted in this document.*

Additional Improvements with Federal Funding



The ongoing Environmental Assessment must be completed to choose the high speed rail line section between Richmond and Doswell for full corridor eligibility for federal funding.

- > Capacity and reliability improvements between Richmond and Centralia
- > New equipment for Virginia regional service
- > Increased train speeds

Commuter Rail Improvement Project



Improvements in the Virginia Railway Express service area will:

- Increase the on-time performance of passenger trains and upgrade the signal system.
- Expand service and passenger stations between Manassas and Gainesville/Haymarket.
- Construct a new station at Cherry Hill in the I-95 corridor.
- Provide an automatic train control system to reduce potential accidents through advance warning and collision avoidance technology.
- Add new platforms at several existing stations to increase customer access.
- Encourage transit-oriented development.

KEY FACTS

- Population growth and commuter patterns have expanded westward along the I-66 corridor and the I-95 corridor continues to grow in population and employment.
- This project will provide congestion relief and new transportation choices in both the I-95 and I-66 corridors.
- Previous investments include Rail Enhancement funding in FY2005 to conduct preliminary engineering and design for a new third main track and station at Cherry Hill in the I-95 corridor and a major investment study to determine the viability of extending service from Manassas to Gainesville/Haymarket in the I-66 corridor.
- VRE provides the equivalent capacity of one highway lane during peak travel periods.
- In 2008, VRE set numerous ridership records as the demand for commuter rail continues to grow.

Project Management

- ⚡ The Commonwealth, Amtrak, CSX, Norfolk Southern and VRE will coordinate all project-related rail improvements and operations.
- ⚡ The project will be managed through a public-private partnership between the Commonwealth, CSX, Norfolk Southern, VRE and federal partners.

Project Phasing

Phase I

Capacity/Stations (I-95/I-66)

\$18.2 M total project cost (\$12.3 M state)

- ⚡ Automatic train control and cab signals from Arlington to Washington, DC to improve safety.
- ⚡ Final design of the Cherry Hill Third Track in Prince William County.
- ⚡ Preliminary engineering for the service expansion from Manassas to Gainesville/Haymarket.
- ⚡ Track and bridge upgrades between Alexandria and Manassas.

Phase II

Capacity/Stations (I-95/I-66 Part 2)

\$197 M total project cost (unfunded)

- ⚡ Final engineering and construction of the Cherry Hill Third Track in Prince William County.
- ⚡ Station capacity and additional platform improvements.

Phase III

Capacity/Stations (I-66 Part 3)*

\$88.2 M total project cost (unfunded)

- ⚡ Construction of tracks and stations for an average of four daily trains serving Gainesville/Haymarket. Only track construction, not stations, is included.

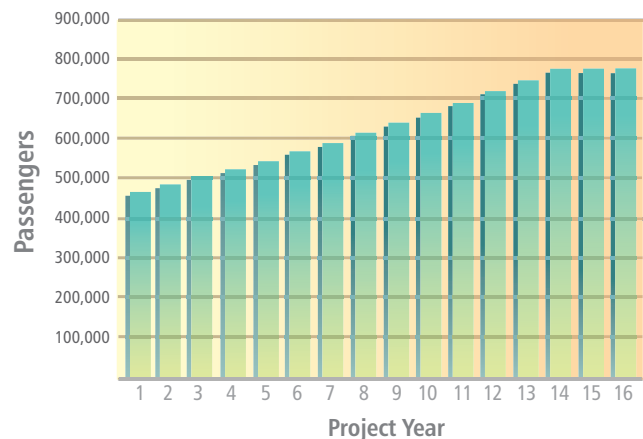
Project Finance

Total project cost- \$303.4 million (\$2008)

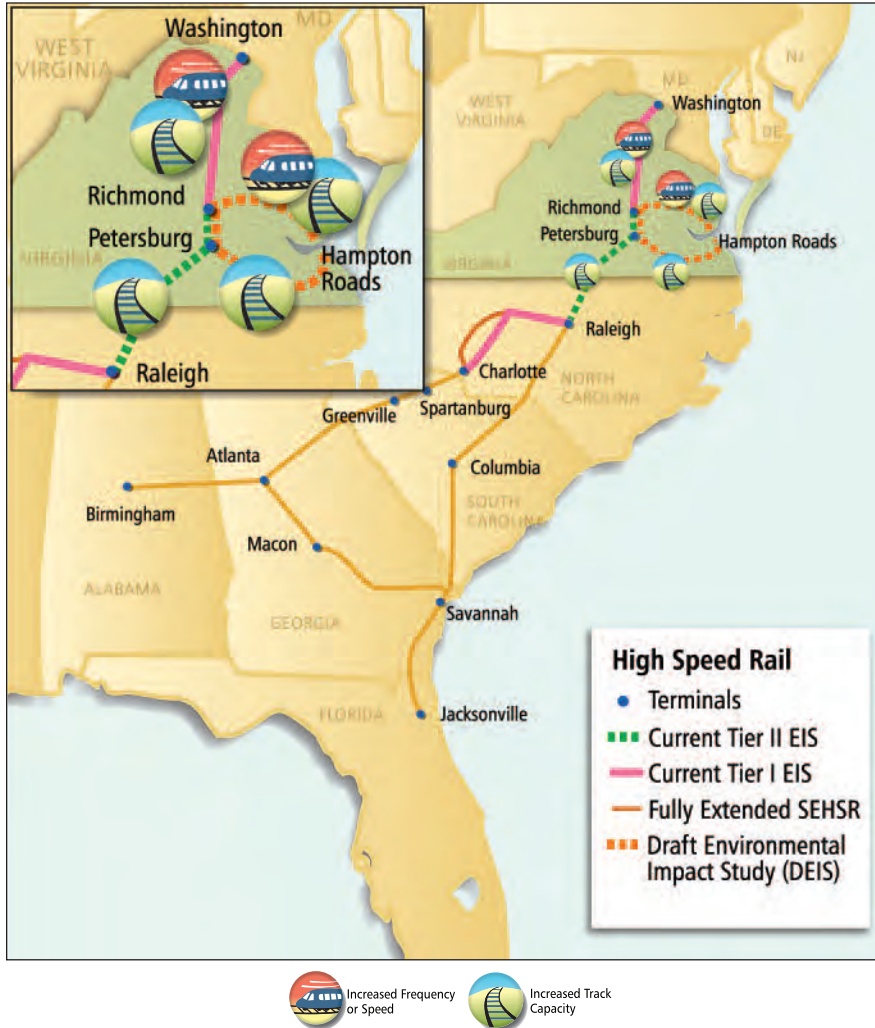
- ⚡ Proposed FY2009 – FY2015 Improvement Plan – \$18.2 M total project cost for Phase I to be completed from FY09-FY15 (\$12.3 M state).
- ⚡ Stations for Phases II and III are unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- ⚡ Project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental sources.
- ⚡ Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners. All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- ⚡ All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

**All marked items require operating funds in addition to the capital costs noted in this document*

GAINESVILLE TO HAYMARKET ROUTE RIDERSHIP PROJECTIONS



Southeast High Speed Rail Project



The Commonwealth's contributions toward the Southeast High Speed Rail Project will:

- Evaluate a high speed rail connection between Hampton Roads and Richmond's Main Street Station.
- Evaluate high speed passenger rail service on the designated high speed rail corridor from Raleigh, NC through Richmond to Washington, DC.
- Provide passengers with a more cost-effective, competitive alternative to air travel.
- Connect Virginia to the Northeast Corridor, the only active high speed rail corridor operating in North America.

KEY FACTS

- As population grows in major urban corridors, as highway and airline congestion increase and as energy costs rise, rail ridership is increasing across the U.S., creating demand for higher speed rail services.
- The I-95 corridor has been identified as a priority corridor for high speed rail in the U.S.
- The Southeast High Speed Rail corridor will extend high speed rail service south from Washington, DC to Richmond and on to Raleigh and Charlotte, NC. It will also expand east from Richmond to Hampton Roads.
- Virginia and North Carolina continue to advance high speed rail in the Southeast High Speed Rail corridor. In October 2002, the Tier I Environmental Impact Statement (EIS) was completed from Washington, DC to Charlotte, NC. In December 2005 Virginia and North Carolina began the Tier II EIS through the allocation of Virginia Rail Enhancement funds to extend the project work from Raleigh, NC to Richmond. As this project advances through the environmental process, additional work is necessary for the completion of the Tier II EIS for railway and associated highway improvements for the proposed 168-mile corridor between Richmond and Raleigh, NC.

Project Management

- The Commonwealth, Amtrak, CSX and Norfolk Southern will coordinate all project-related rail improvements and operations.
- The project will be managed through a public-private partnership between the Commonwealth, North Carolina, CSX, Norfolk Southern and federal partners.

Project Phasing

Phase I

Environmental Studies

\$4 M total project cost (\$2.3 M state)

- Complete the Tier II Environmental Impact Statement (EIS) and seek a federal Record of Decision for railway and associated highway design in the corridor from Richmond Main Street Station to Raleigh, NC.
- Complete the Richmond/Hampton Roads regional Draft EIS.

Phases II and III

Construction and Improvements

*\$1,713.7 M total project cost (unfunded)**

- Engineering, track construction and improvements from Washington, DC to the North Carolina state line for high speed rail service.

Project Finance

Total project cost: \$1,717.7 million (\$2008)

- Proposed FY2009 – FY2015 Improvement Plan – \$4 M total project cost for completion of Phase I from FY09-FY15 (\$2.3 M state).
- Phases II and III are unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- Project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources.
- Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners. All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

**All marked items require operating funds in addition to the capital costs noted in this document*

National Gateway Project



KEY FACTS

- The multi-state National Gateway Project extends from North Carolina to Ohio and parallels I-95 through Virginia, with a connection to the Port of Virginia.
- The diversion of freight from highway to rail will benefit from a multi-state initiative involving federal, state, local and private partners.
- The project plan focuses on improving clearances to enable double stack intermodal train operations.

To improve the efficiency of freight rail shipping for the mid-Atlantic ports of Baltimore, MD, Virginia and Wilmington, NC and markets in Pennsylvania, West Virginia, Ohio and other Midwestern states, the National Gateway Project will:

- Divert freight traffic from highway to rail and double the capacity for freight shipments in the I-95 corridor by providing double-stack clearances for freight containers.
- Increase capacity and service reliability through Washington, DC to allow more trains to operate in this heavily congested part of the corridor.
- Support the enhancement of VRE and Amtrak service in the I-95 corridor.
- Add a new freight yard to support increased container traffic originating at Virginia's Ports.



Project Management

- ⌘ The Commonwealth, CSX and VRE will coordinate all project-related rail improvements and operations.
- ⌘ The project will be managed through a public-private partnership between the Commonwealth, CSX, federal partners and other states.

Project Phasing

Phase I

Capacity Improvements

\$135.7 M total project cost (\$25 M state)

- ⌘ Adds corridor double stack clearance capacity by removing or modifying five bridges that obstruct the vertical clearance needed for double stack rail operations on the I-95 Corridor between the North Carolina state line and Washington, DC.
- ⌘ Environmental studies and preliminary engineering for two new highway grade-separated bridges.
- ⌘ Engineering, design and construction of the new double stack Virginia Avenue Tunnel.

Phase II

Clearance Completion

\$5.9 M total project cost (unfunded)

- ⌘ Completes Virginia Avenue Tunnel double stack clearance and bridge clearance work.

Phase III

Freight Yard Capacity

\$46.4 M total project cost (unfunded)

- ⌘ Additional yard capacity at Kilby Yard in Suffolk to enhance container shipping service.
- ⌘ Federal and multiple state partnerships are required to reach project objectives.

Project Finance

Total project cost: \$188 million (\$2008 dollars)

- ⌘ Proposed FY2009 – FY2015 Improvement Plan – \$135.7 M total project cost for Phase I completion from FY10-FY15 (\$25 M state).
- ⌘ Phases II and III represent unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- ⌘ Assuming no availability of federal funds other than those assumed by CSX, the total project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources. Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners.
- ⌘ All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- ⌘ All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

I-81/Route 29 Intercity Passenger Rail Project



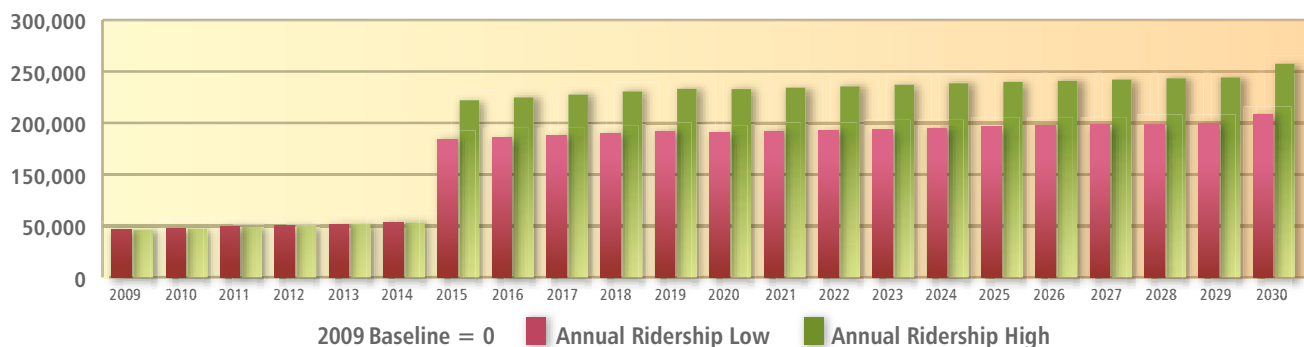
To enhance passenger rail service along the Route 29, Interstate 81 and Route 460 corridors, the I-81/Route 29 Intercity Passenger Rail Project will:

- Add new passenger rail service to Lynchburg, Roanoke and Bristol with connections to Richmond and Washington, DC.
- Construct new stations to support the new service.
- Increase capacity through new passing tracks.
- Reduce travel time by improving rail infrastructure for higher speeds.

KEY FACTS

- This project provides incremental service improvements to enhance passenger rail service in Central and Southwestern Virginia.
- Annual Amtrak ridership in this corridor totaled 50,554 in 2007. With this new regional service, annual ridership could increase by between 185,400 and 243,500 annual passengers by 2030.

I-81/ROUTE 29 INTERCITY PASSENGER RAIL PROJECT ANNUAL RIDERSHIP PROJECTIONS 2009-2030 (SEVEN DAY SERVICE)



*2009 Implement new State funded train between Kemper Street Station, Lynchburg and Washington, DC

**2015 Improvements completed to originate service in Roanoke and Bristol to Washington, DC

Project Management

- The project will be managed through a public-private partnership between the Commonwealth, Norfolk Southern, Amtrak and federal partners.
- The Commonwealth, Amtrak, Norfolk Southern and VRE will need to coordinate improvements and operations in the corridor.

Project Phasing

Phase I

Washington, DC/Lynchburg

*\$40.7 M total project cost (\$30.6 M state share)**

- Add one daily train between Washington, DC and Lynchburg Kemper Street Station as a demonstration project for three years beginning in 2009.
- Increase commuter capacity in the VRE service area.
- Complete the capacity study for the entire project corridor from Washington, DC to Bristol and Lynchburg.
- Increase capacity for a second train to Lynchburg with construction of second main line track between Nokesville and Calverton.

Phase II

Capacity/Stations Roanoke

*\$105.9 M total project cost (unfunded)**

- Add one additional train to extend service to Roanoke.
- Increase capacity and service reliability from Lynchburg to Roanoke.
- Improve the Roanoke Train Station and train storage facility.

Phases III and IV

Capacity/Stations Bristol/Richmond

*\$64 M total project cost (\$45.5 M state)**

- Add one train to Bristol from Roanoke, including one train set and capacity improvements.
- Provide train service from Bristol to Richmond and from Bristol to Washington, DC.

Project Finance

Total project cost: \$210.6 million (\$2008)

- Proposed FY2009 – FY2015 Improvement Plan– \$40.7 M total project cost for completion of Phase I from FY10-FY15 (\$30.6 M state).
- Project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources. Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners.
- Phases II, III and IV represent unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

**All marked items require operating funds in addition to the capital costs noted in this document.*

Crescent Corridor Project



To improve the efficiency of freight rail shipping and provide highway congestion relief in Virginia, the Crescent Corridor Project will:

- Divert freight shipments from highway to rail along I-20, I-40, I-75, I-85, I-81 and Route 29.
- Expand rail capacity.
- Facilitate the expansion of Amtrak service to Charlottesville, Lynchburg, Roanoke and Bristol.
- Support the enhancement of VRE service from Manassas to Gainesville/Haymarket.

KEY FACTS

- The multi-state Crescent Corridor extends from New Orleans/Memphis to New Jersey.
- The success of truck diversion on the Crescent Corridor depends on public private partnerships with multiple states and will involve federal, state, local and private parties.
- In Virginia, the corridor has two distinct rail lines paralleling I-81 that will be used together to increase rail capacity.

Project Management

- ⚡ The Commonwealth, Norfolk Southern and the I-81 corridor states will need to coordinate resources to fully develop this project. A multi-state agreement and a federal funding partner are essential to advance this initiative.
- ⚡ The project will be managed through a public-private partnership between the Commonwealth, Norfolk Southern, federal partners and other states.

Project Phasing

Phase I

Priority Capacity Improvements

\$38 M total project cost (\$26.6 M state)

- ⚡ Preliminary engineering and construction of the top four priority capacity projects located near Berryville, Elkton, Bentonville and Stanley.
- ⚡ Completion of Manassas to Front Royal capacity improvements.

Phase II

Secondary Capacity Improvements

\$82.2 M total project cost (unfunded)

- ⚡ Additional capacity and reliability improvements on the Shenandoah, Piedmont, Manassas, Heartland and Bristol lines.

Phase III

Remaining Capacity Improvements

\$394 M total project cost (unfunded)

- ⚡ Remaining capacity, train reliability, and speed improvements on the Shenandoah, Piedmont, Manassas, Heartland and Bristol lines.

Project Finance

Total project cost: \$514.2 million (\$2008)

- ⚡ Proposed FY2009 – FY2015 Improvement Plan– \$38 M total project cost to complete Phase I from FY10-FY15 (\$26.6 M state).
- ⚡ Phases II and III represent unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- ⚡ Assuming no availability of federal funds, the project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources. Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners.
- ⚡ All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- ⚡ All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

Heartland Corridor Project



To improve freight service between the Ports of Virginia and markets in the Midwest along the Route 460 and I-81 corridors, the Heartland Corridor project will:

- Complete highway access improvements needed for the Roanoke Region Intermodal Facility, a regional initiative to generate up to 2,900 jobs and up to \$71 million in tax revenues annually.
- Increase tunnel clearances to provide redundant routes on sections of the corridor that host freight and passenger operations.

KEY FACTS

- The Heartland Corridor will double the intermodal rail capacity along Route 460 and significantly improve freight shipping between markets in the Midwest.
- This initiative has been identified as a project of national significance.
- Norfolk Southern, DRPT and Amtrak are exploring the possibility of new passenger service between Bristol, Lynchburg and Washington, DC along part of this corridor.

Project Management

- ▣ The project will be managed through a public-private partnership between the Commonwealth, Norfolk Southern, federal partners and other states.

Project Phasing

Phase I

Access Improvements

\$18.1M total project cost (\$12.7 M state)

- ▣ Relocation of Cove Hollow Road to improve access to the facility.
- ▣ Completes intermodal facility funding based on final selected site costs.

Phase II

Clearance Improvements

\$9.6 M total project cost (unfunded)

- ▣ Added corridor double stack capacity through improving the clearance of second main line Montgomery Tunnel.

Project Finance

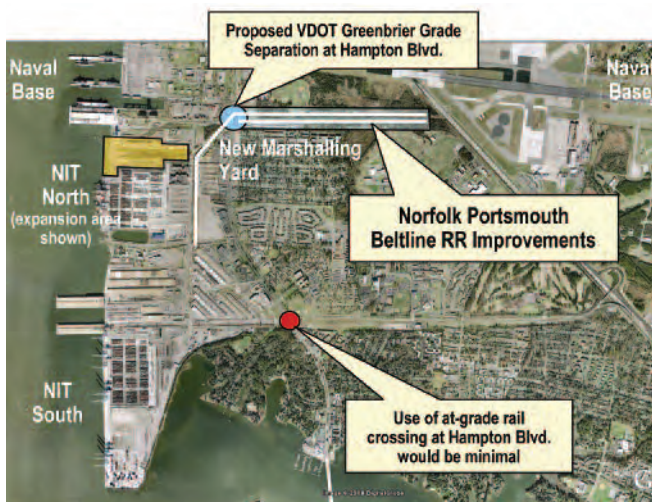
Total project cost: \$27.7 million (\$2008)

- ▣ Proposed FY2009 – FY2015 Improvement Plan– \$18.1 million total project cost to complete Phase I from FY10-FY15 (\$12.7M state).
- ▣ Phase II represents unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- ▣ Project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources. Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners.
- ▣ All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
- ▣ All costs and schedules are based on preliminary planning estimates and are subject to revision as additional information becomes available.

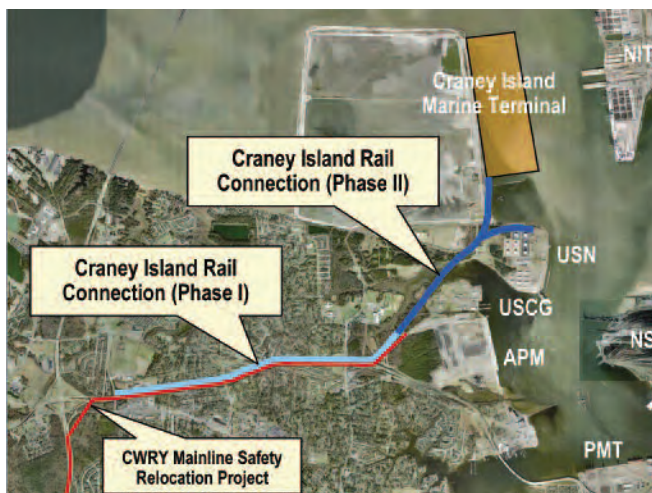
Port-Related Rail Improvement Project



NIT CENTRAL YARD IMPROVEMENTS



NORFOLK PORTSMOUTH BELTLINE RAILROAD IMPROVEMENTS



CRANEY ISLAND PROJECT IMPROVEMENTS - Unfunded

To improve rail capacity at the Ports of Hampton Roads, support increased freight truck to rail diversion and provide economic benefits to the Commonwealth by reducing transportation costs for both domestic and international trade, the Port-Related Rail Improvement Project will:

- Provide competitive rail access to Virginia's ports to ensure that shippers and consumers benefit from cost-effective transportation choices.
- Relocate rail lines serving the ports to enhance safety.
- Increase container and train handling capacity to streamline freight handling.
- Increase rail capacity to allow more containers to be diverted to rail.

KEY FACTS

- The project will double the on-dock rail capacity at Norfolk International Terminals with an on-dock rail yard.
- Additional yard capacity improvements will enhance highway grade crossing safety and reduce highway delays at grade crossings.
- The proposed Craney Island marine terminal will transport 50 percent of the projected 1.43 million rail container activity associated with this project.

Project Management

- ⚡ The project will be managed through a public-private partnership between the Commonwealth, the ports and the operating railroads.

Project Phasing

Phase I

Yard Improvement Engineering

\$2.2 M total project cost (\$0.8 M state)

- ⚡ Preliminary engineering of capacity improvements to the Norfolk International Terminals on-dock rail yard.
- ⚡ Preliminary engineering of capacity improvements to the Norfolk and Portsmouth Belt Line rail yard.

Phase II

Yard Improvement Construction

\$41.7 M total project cost (unfunded)

- ⚡ Construction of capacity improvements to the Norfolk International Terminals on-dock rail yard.
- ⚡ Construction of capacity improvements for the Norfolk and Portsmouth Belt Line yard to relocate train movements to a grade separated crossing.

Phase III

Craney Island Connector

\$20.2 M total project cost (unfunded)

- ⚡ Additional capacity and access improvements for the Craney Island Terminal.
- ⚡ Construction of a second main line track in the median of Route 164.
- ⚡ Preliminary engineering and design of the Craney Island Rail Connector track.

Project Finance

Total project cost: \$64.1 million (\$2008)

- ⚡ Proposed FY2009 – FY 2015 Improvement Plan- \$2.2 M total project cost for completion of Phase I from FY10-FY15 (\$0.8 M state).
- ⚡ Phases II and III represent unfunded needs identified in the Rail Resource Allocation Plan, which are proposed for funding in future years.
- ⚡ Project costs will be funded through a combination of available federal, state, private railroad, local jurisdiction and nongovernmental funding sources. Project completion and service implementation dates are subject to the availability of funding and contract negotiations with public and private partners.
- ⚡ All capital costs are based on the most recently available estimates, expressed in 2008 dollars.
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